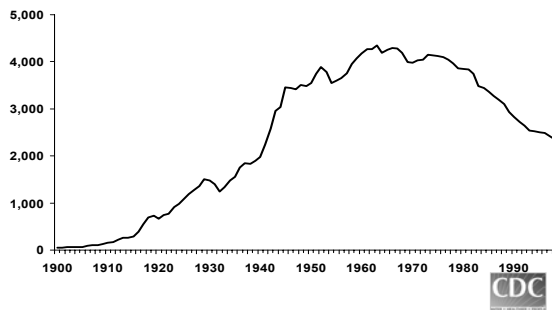


Lessons from Public Health Achievements of the Late 20th Century for Emerging Health Issues of the 21st Century

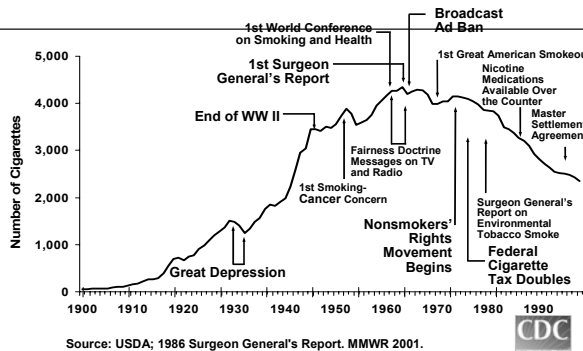
Lawrence W. Green, DrPH
Director, Office of Science & Extramural Research
Centers for Disease Control & Prevention
DMICC, Bethesda, April 8, 2004



What is this public health achievement of the 20th Century?
What is the research method to judge this an achievement?



Adult Per Capita Cigarette Consumption and Major Historical Events—United States, 1900-2000



Lesson 1: Surveillance--Making Better Use of Natural Experiments

- Key to establishing baselines & trend lines that can be projected to warn against neglect
- Key to putting an issue on the public policy agenda
- Key to showing change in relation to other trends, policy and program interventions
- Key to comparing progress in relation to objectives and programs, over time and between jurisdictions.



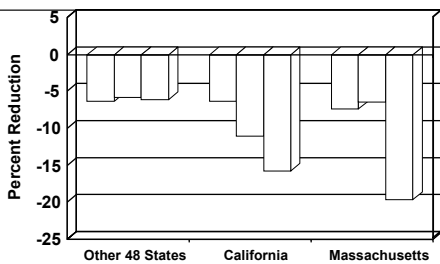
Smokefree Indoor Air Legislation as of September 30, 1998-- Government Worksites in the United States



- 11 No smoking allowed 30 Designated smoking areas required or allowed
2 Designated smoking areas with separate ventilation 8 No restrictions



Change in Per Capita Cigarette Consumption California & Massachusetts versus Other 48 States, 1984-1996



- 1984-1988 □ 1990-1992 □ 1992-1996



What Worked? Making Better Use of “Natural Experiments”

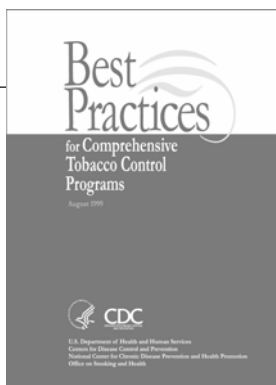
- Comprehensive program and tax increases in CA and MA resulted in:
 - 2 - 3 times faster decline in adult smoking prevalence
 - Slowed rate of youth smoking prevalence compared to the rest of the nation
 - Accelerated passage of local ordinances
- Similar, though later, experience in OR & AZ, and in population segments of FL



Lesson 2: Comprehensiveness

- In trying to isolate the essential components of tobacco control programs that made them effective, none could be shown to stand alone
- Any combination of methods was more effective than the individual methods
- The more components, the more effective
- The more components, the better coverage





<http://www.cdc.gov/tobacco>

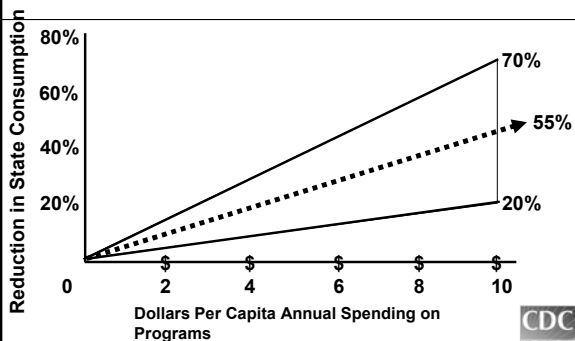


Components of Comprehensive Tobacco Control Programs

- Community Programs
- Statewide Programs
- Chronic Disease Programs
- School & Worksite Programs
- Enforcement
- Counter-Marketing
- Cessation Programs
- Surveillance and Evaluation
- Administration and Management



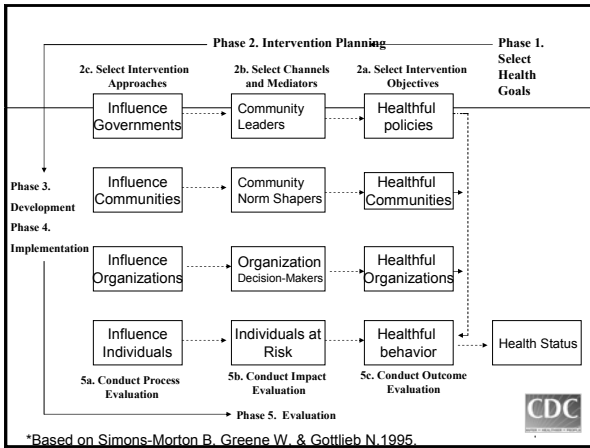
Percent Reductions in Per Capita Cigarette Consumption Attributable to Non-Price Public Health Interventions

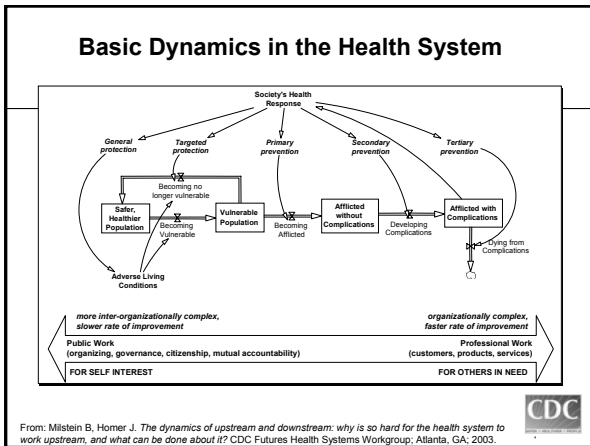


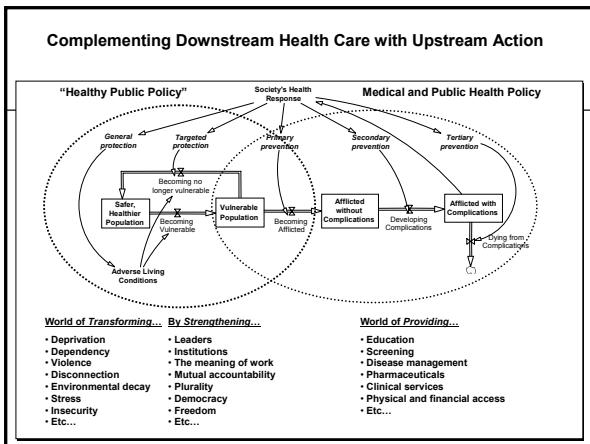
Lesson 3: The Ecological Imperative

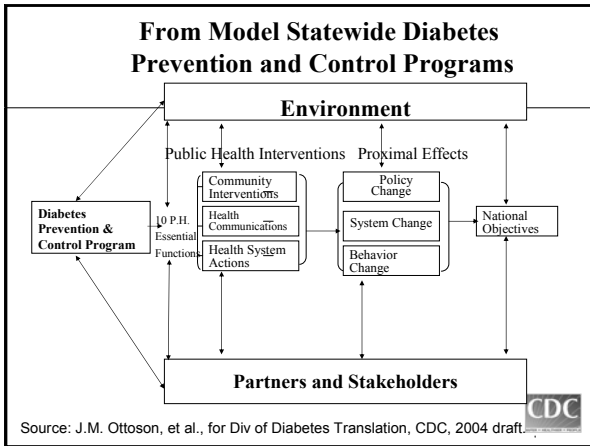
- Need to address the problem at all levels
 - Individual
 - Organizational, institutional
 - Community
 - State, regional
 - National, international
- Need to make these levels of intervention mutually supportive and complementary





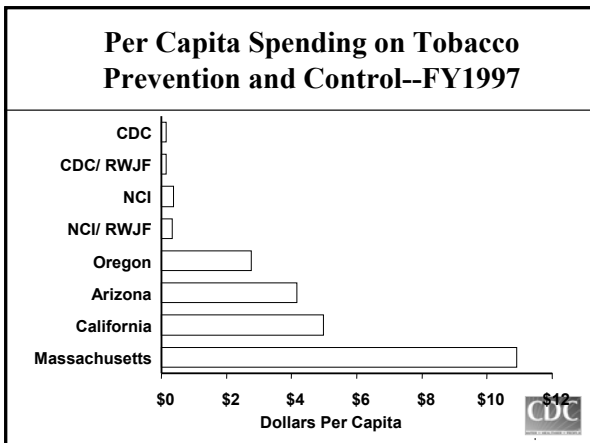






Lesson 4: Threshold Spending

- A critical mass of personal exposure is needed for individuals to be influenced
- A critical mass of population exposure is necessary to effect detectable community response
- A critical distribution of exposure is necessary to reach segments of the population who are less motivated

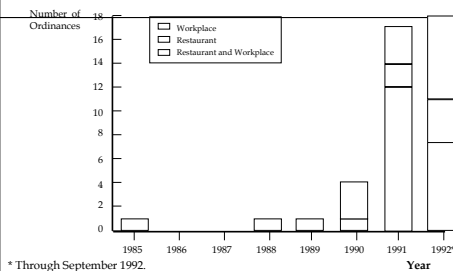


Lesson 5: The Environmental Influence and Settings Imperative

- Environments provide opportunities
- Environments provide cues
- Environments enable choices
- Social environments reinforce positive behavior and punish negative behavior
- Legal penalties and financial incentives can be built into environments
- Settings as best social definition of environment



100-Percent Smokefree Ordinances, by Year of Passage

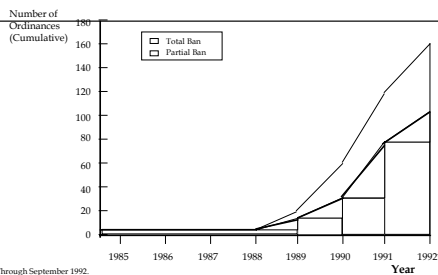


* Through September 1992.

Source: National Institutes of Health, National Cancer Institute (1993). Smoking and Tobacco Control - Monograph 3. Major Local Tobacco Control Ordinances in the U.S.
US Dept. of Health and Human Service. Public Health Service, National Institutes of Health. NIH Publ. No. 93-3532.



Tobacco Vending Machine Ordinances



* Through September 1992.

Source: National Institutes of Health, National Cancer Institute (1993). Smoking and Tobacco Control - Monograph 3. Major Local Tobacco Control Ordinances in the U.S.
US Dept. of Health and Human Service. Public Health Service, National Institutes of Health. NIH Publ. No. 93-3532.



Lesson 6: The Educational Imperative

- Public awareness of risks and benefits
- Public interest in lifestyle options
- Public understanding of behavioral steps
- Public attitudes toward the options & steps
- Public outrage at the conditions that have put them at risk or in danger
- Personal and political actions



Lesson 7: The Evidence-Based Imperative: The Need to Bridge...

- “best practices” indicated by research to their application in practice in underserved areas
- “best practices” from research to the most appropriate adaptations for special populations
- The success of individual behavior changes of the affluent to the system changes needed to reach the less affluent, less educated...
- University-based, investigator-driven research to practitioner- & community-centered research



Green LW. *Am J Health Behav*, 2001. www.ajhb.org/25-3-2.htm

A Vision for Future Effectiveness- and Community-based “Best Practices”*

- Emphasize control by practitioner, patient, client, community or population
- Emphasize local evaluation and self-monitoring
- Synthesizing research other than randomized trials
- Research on tailoring and new informatics technologies
- More systematic study of place, setting, and culture
- “Best practice” as processes to combine and adapt packaged interventions: population-based diagnostic planning & evaluation cycle



*Green LW. From research to “best practices”... *Am J Health Behavior* 2001; 25 <http://www.ajhb.org/25-3-2.htm>

Matching, Mapping, Pooling and Patching

- Matching levels of intervention with evidence-based best practices
- Mapping changes needed against theory to fill gaps in empirical evidence
- Pooling experience from model programs to fill gaps in evidence and theory
- Patching remaining gaps with local experience, innovation and evaluation



Recap of the Seven “Lessons”

- Surveillance, and better use of natural experiments
- Comprehensiveness
- The ecological imperative
- Threshold spending
- The environmental and settings imperative
- The educational imperative
- The evidence-based imperative and limitations